

CLAIMS

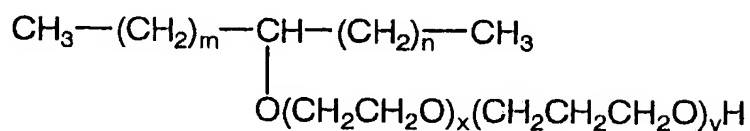
1. An ink composition comprising:

(a) an aqueous medium having a conductivity of 250 μ S/cm (at 25°C)

5 or lower;

(b) a pigment; and

(c) a compound represented by the formula (I):



wherein m and n each are an integer of 0-11; m+n is an integer of

9-11; x is an integer of 5-9; and y is a number between 2.5 - 5.

10 2. The ink composition of claim 1, wherein the mixed compound of the formula (I) is contained in a critical micelle concentration or above.

3. The ink composition of claim 1, wherein its conductivity is 8 mS/cm (at 25°C) or lower.

15 4. The ink composition of claim 1, further comprising 10-70 wt% of a water-soluble organic solvent.

5. The ink composition of claim 4, wherein the water-soluble organic solvent comprises at least one organic solvent having a vapor pressure higher than that of water.

20 6. The ink composition of claim 4, wherein the water-soluble

organic solvent comprises at least one organic solvent having a vapor pressure of 0.05 mmHg or lower at 20°C.

7. The ink composition of claim 4, wherein the water-soluble organic solvent is selected from glycol ethers and/or polyhydric
5 alcohols.
8. The ink composition of claim 1, wherein the pigment is a self-dispersion type pigment in which a carboxylic acid or a sulfonic acid is introduced on its surface.
9. The ink composition of claim 1, wherein the pigment is C.I.
10 Pigment Blue 15:3 or C.I. Pigment Blue 15:4.
10. The ink composition of claim 1, wherein the pigment comprises at least one pigment selected from the group consisting of C.I. Pigment Red 122, C.I. Pigment Red 209 and C.I. Pigment Violet
19.
11. The ink composition of claim 1, wherein the pigment comprises at least one pigment selected from the group consisting of C.I. Pigment Yellow 74, C.I. Pigment Yellows 128 and 138, and C.I. Pigment Yellow 180.
15
12. The ink composition of claim 1, wherein the pigment is a
20 carbon black.
13. An ink set comprising:
an ink composition of claim 1, wherein the pigment is C.I. Pigment Blue 15:3 or C.I. Pigment Blue 15:4;

an ink composition of claim 1, wherein the pigment comprises at least one pigment selected from the group consisting of C.I. Pigment Red 122, C.I. Pigment Red 209 and C.I. Pigment Violet 19; and

5 an ink composition of claim 1, wherein the pigment comprises at least one pigment selected from the group consisting of C.I. Pigment Yellow 74, C.I. Pigment Yellows 128 and 138, and C.I. Pigment Yellow 180.

14. An ink set comprising:

10 an ink composition of claim 1, wherein the pigment is C.I. Pigment Blue 15:3 or C.I. Pigment Blue 15:4;

 an ink composition of claim 1, wherein the pigment comprises at least one pigment selected from the group consisting of C.I. Pigment Red 122, C.I. Pigment Red 209 and C.I. Pigment Violet
15 19;

 an ink composition of claim 1, wherein the pigment comprises at least one pigment selected from the group consisting of C.I. Pigment Yellow 74, C.I. Pigment Yellows 128 and 138, and C.I. Pigment Yellow 180; and

20 an ink composition of claim 1, wherein the pigment is a carbon black.

15. A recording method for recording images comprising allowing an ink composition of claim 1 to adhere to a recording medium.

16. A recording method for recording images comprising applying a pressure to eject drops of an ink and to allow the drops to adhere to a recording medium, using an ink composition of claim 1 as the ink.

17. An ink head comprising:

- 5 (i) an ink tank retaining an ink composition of claim 1;
(ii) an ink chamber having an ejection orifice through which drops are ejected, and having the ink composition fed from the ink tank; and

(iii) a piezoelectric element provided inside the ink chamber
10 and causing a strain in response to a voltage applied to the ink composition stored in the ink chamber.

18. An ink head comprising:

- (i) an ink tank retaining an ink composition of claim 1;
(ii) an ink chamber having an ejection orifice through which
15 drops are ejected, and having the ink composition fed from the ink tank; and

(iii) a heating element provided inside the ink chamber for heating the ink composition stored in the ink chamber to create a bubble so that a pressure is applied to the ink composition.

20 19. A recorded image which is recorded by using an ink composition of claim 1.